



State of Montana
Montana Department of Transportation

Agency IT Plan
Fiscal Year 2012-2017

Updated January, 2013

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EXECUTIVE SUMMARY

This is the Montana Department of Transportation's FY2012 Agency IT Plan. This plan reflects the information technology environment of MDT; an agency whose mission is to service the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality, and sensitivity to the environment.

Among the items presented in MDT's IT plan are outlines of MDT's information security management program, our five strategic IT goals and supporting objectives, and IT expenditure information.

Finally, three IT initiatives have been included for the reporting period.

SECTION 1: AGENCY ADMINISTRATIVE INFORMATION

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IT Inventory

The IT inventory database located at <http://mine.mt.gov/enterpriseitinventory> has been updated. As required by MCA 2-17-524(3)(c) the plan will be updated by June 30th, 2012.

SECTION 2: AGENCY IT MISSION

The Information Services Division's mission is to provide the technology products and enabling services to allow MDT to effectively and efficiently deliver a quality transportation system.

SECTION 3: AGENCY REQUIRED PROGRAMS

Information Security Management (ISM) Program General Description

According to MCA 2-15-114 and the State's Information Security Programs policy [1240.X08], MDT has begun implementing a Security Management Program that follows the National Institute of Standards and Technology (NIST) recommendations and guides. The first focus has been the Risk Management Plan based on NIST Special Publication 800-39.

MDT has defined its Security Roles as of October 2009. Many of the areas of responsibility have had little action due to resource constraints.

MDT is using the Information Security Management (ISM) Risk Management Strategy Guide [1240.G02] developed through the State Security Program Office and the Information Security Manager's Group (ISMG) team effort to identify the details of its plan. The initial focus has been on framing the risk and identifying how to assess it. Several items have been produced in support of that effort, including:

- Security Awareness and Training Program Plan
 - Ties to MDT Human Resources Training Policy
 - Utilization of Securing the Human (SANS) training
- MDT's Risk Assessment Process
 - Characterization and Prioritization Tool
 - Basic Risk Assessment Checklist
 - Facilitated Risk Analysis and Assessment Process & associated Checklist
 - Threat Assessment Document

Future Security Program Plans

MDT's Information Security Management Program is challenged with limited resources; primarily manpower and the funding requirements for that staffing. Given that, it is still anticipated that a review of current status will occur in the first six months of calendar 2013 such that the Agency Director can ascertain his/her role and responsibilities as it relates to the Security Management Program and recommend any changes he/she sees as applicable. Additionally there will be a review to determine if there have been critical changes to NIST requirements based on newly published resource guides. The Information Security Management Program will utilize the Risk Assessment process defined to complete the assessment on those applications identified as critical through the Business Impact Analysis (see COOP section below). The program will continue to grow and do more with the *Risk Response* and *Monitoring of Risk* identified in NIST 800-39 and in the supporting State Strategy Guide 1240.G02 in the 2013/2014 biennium.

Continuity of Operations (COOP) Capability Program General Description

MDT has launched a Business Impact Analysis (BIA) activity across the agency to identify the key business functions for each division or business unit. This initiative is collecting not only the essence of what the key business functions are, but also whether or not they tie into the identified State Essential Business Functions and what applications systems are needed to support those functions and the criticality of those applications in maintaining the business of MDT. To date, 2 divisions and 2 key business units are complete.

The Office of Occupational Safety and Health (part of our Human Resources Division) is responsible for the Emergency Action Plans for each MDT site location. This is focused on how to safely exit any MDT building within the State and remain secure until such time as an all-clear is given by the persons in authority.

The Emergency Operations and Disaster Plan is produced by the MDT Maintenance Division. This plan identifies the responsibilities for implementing an effective response to various situations and otherwise restoring the transportation system. The Plan is a 'living' document; training, exercises, and experience with its implementation will suggest changes for improvement as those events occur.

Information Systems recovery is the responsibility of the Information Services Division and is often referred to as Disaster Recovery. MDT does not have a specific plan since the BIA referenced above is not yet complete. Instead MDT has taken a more global approach. Currently all of our operational hardware (servers, storage, etc.) is housed in the State Managed Data Center. This facility is newer and better prepared to handle natural disasters such as earthquakes, tornadoes, etc. MDT has a full back-up of its Data Base in the Billings I-Connect facility and a full back-up of all SAN storage (file shares, etc) in the secure Helena Federal Reserve Bank facility. Because of these back-ups, MDT's current disaster recovery strategy is to utilize the back-up copy of data with a quickly virtualized machine restoration as needed.

Future COOP Program Plans

MDT's COOP/COG Program is challenged with limited resources; primarily manpower and the funding requirements for that staffing and agency priorities. Given that, it is still anticipated that the BIA will be completed in calendar 2013. This in combination with the Risk Assessment of MDT's application portfolio as part of the Information Security Program will identify further requirements for the Information Services Disaster Recovery Plan and the data for inclusion in the LDRPS program utilized by the State Continuity Services team.

SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

Goal Number 1:

IT Goal 1 Expand IT solutions to meet customer needs

Description: This strategic goal focuses on implementing IT-based solutions throughout the agency in order to improve operational efficiencies, reduce costs, and improve decision-making.

Benefits: The benefits realized are improved operational efficiencies, reduced costs, and improved decision-making. The beneficiaries include MDT personnel, as well as MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the state's IT goals 2.

Supporting Objective/Action

Objective 1-1 Expand business analysis opportunities

Objective 1-2 Assess financial processes and develop an IT strategy

Objective 1-3 Assess potential improvements for the Maintenance Management System

Objective 1-4 Assess HR processes and develop an IT strategy

Objective 1-5 Develop a traveler information strategy

Objective 1-6 Develop an electronic transactions approval framework

Goal Number 2:

IT Goal 2 Implement IT Service Improvements

Description: The focus of this strategic goal is to assess and implement improvements to existing and potential new IT services in support of the wide variety of customer expectations and operational needs throughout MDT.

Benefits: The benefits realized are improved IT services. The beneficiaries include MDT personnel throughout the agency, as well as MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the state's IT goals 1, 2, and 3.

Supporting Objective/Action

Objective 2-1 Implement an electronic records management solution for MDT

Objective 2-2 Develop and implement a GIS strategic plan

Objective 2-3 Develop and implement a web strategy

Objective 2-4 Implement an ISD service portal

Objective 2-5 Develop a forms management strategy

Objective 2-6 Assess data management practices and develop strategy

Objective 2-7 Assess video conferencing alternatives

Objective 2-8 Assess IT training needs

Objective 2-9 Institute IT project management services

Goal Number 3:

IT Goal 3 Improve ISD Processes

Description: The Information Services Division has a wide variety of technical and business processes in place to support the services offered to MDT. The focus of this goal is to assess and improve ISD's processes in order to provide the most efficient and effective services possible.

Benefits: The benefits realized are improved processes within the Information Services Division. The beneficiaries include MDT personnel, as well as MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the state's IT goals 1, 2, 3, 4, and 5.

Supporting Objective/Action

Objective 3-1 Develop business partnerships

Objective 3-2 Develop and implement a disaster recovery and COOP/COG strategy

Objective 3-3 Develop and implement an IT investment selection process

Objective 3-4 Develop and implement an IT service catalog

Objective 3-5 Develop and implement change management processes

Objective 3-6 Develop and implement decision and communication processes

Objective 3-7 Assess and manage IT risks

Objective 3-8 Define the information architecture and technology strategy

Objective 3-9 Develop and implement project management processes

Objective 3-10 Assess and implement new application development methodologies

Goal Number 4:

IT Goal 4 Research and Develop New Technologies and Services

Description: It is imperative to continually stay abreast of the latest technology developments and take advantage of changes in the industry. This strategic goal focuses on continually assessing and implementing new technologies and services into MDT's operations as warranted.

Benefits: The benefits realized are well researched new technologies and services for the benefit of ISD's resources. The beneficiaries include MDT personnel throughout the agency.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the state's IT goals 2 and 3.

Supporting Objective/Action

Objective 4-1 Assess and develop mobile computing solutions

Objective 4-2 Develop an MDT social media strategy

Objective 4-3 Assess unified communications technologies

Objective 4-4 Assess desktop computing alternatives

Objective 4-5 Assess open source technologies

Objective 4-6 Implement proof-of-concept environments

Objective 4-7 Assess and implement new endpoint management tools

Goal Number 5:

IT Goal 5 Develop the IT workforce

Description: The Information Services Division recognizes it is our people that make us so successful. This strategic goal is a continued commitment to further develop the workforce to ensure we have the best professional staff possible.

Benefits: The benefits realized are a professional IT workforce. The beneficiaries include the ISD workforce.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the state's IT goals 1.

Supporting Objective/Action

Objective 5-1 Provide team collaboration opportunities

Objective 5-2 Assess resource demands and develop hiring strategy

Objective 5-3 Develop cross-training and personal growth opportunities

Objective 5-4 Investigate recruitment strategies

Objective 5-5 Improve and expand career ladder opportunities

Objective 5-6 Explore employee incentives and recognition strategies

Objective 5-7 Expand technical and soft skill training

Objective 5-8 Develop succession planning strategy

SECTION 5: IT INITIATIVES (FY2012 – FY 2017)

Initiative 1 Safety Information Management System (SIMS)

Develop and Implement a Safety Information Management System using contracted IT services. The analysis of a 2009 SMIS feasibility study confirmed MDT pursue replacing its current Safety Management System by detailing requirements for a new SIMS application and construct a request for proposal process which allows vendors to propose either a transfer of an existing SMIS system, implementing a commercial off the shelf solution, or building a custom solution.

The SIMS initiative will address the following issues facing MDT:

1. The implementation of The CTS America Public Safety System by the Montana Highway Patrol in the fall of 2008 and the pending retirement of their previous system, the Montana Accident Reporting System (MARS), has created data architecture and data consistency issues for MDT. MARS has provided the current SMS with the raw crash data for analysis and reporting. Thus, the SMS application needs to be re-architected to accept the CTS America Public Safety System database structure which is not the same as MARS.

2. Adoption and application of the 2008 Model Minimum Uniform Crash Criteria (MMUCC), a major revision to the nationally-accepted crash investigation and reporting guideline. The third edition of MMUCC was published during the summer of 2008, and is a voluntary guideline for collecting consistent, reliable crash data that are more effective for identifying traffic safety problems, establishing goals and performance measures, monitoring the progress of programs, and allocating resources for enforcement, engineering and education. The use of the MMUCC will absolutely require the current SMS to evolve to meet the needs of its customers.

3. Adoption, in whole or in part, the new National Highway Traffic Safety Administration (NHTSA) roadway inventory guideline known as the Model Minimum Inventory of Roadway Elements (MMIRE) and provide a system which can support the storage of this enhanced roadway inventory information as it is collected and available for use in analysis. The data model of the current SMS application does not support this guideline.

4. Appropriate accessibility to data from Montana Court System for traffic safety related case disposition data. This classification of data has not been available to MDT in the past and will enhance analysis and reporting on traffic safety related citations. The current SMS was not designed with court data availability and lacks the database structure or functional capabilities to accept, store and display this information.

5. The last update to the current SMS was in the mid-1990s. The system, while functionally robust is difficult to use, especially for new users of the application. As a result, stakeholders are requesting a new system which utilizes more current technology and is more user-friendly.

Integration of other enabling technologies support enhanced safety information analysis. This includes automated collision diagrams, improved data displays, and web-based services. Internal and external stakeholders are requesting the ability to utilize GPS data, aerial photography, digital as-built plans, GIS applications, and enhanced linear referencing. There is limited return on investment to include these enhancements within the architecture of the current SMS application.

Initiative 2

Maintenance Management System (MMS)

The Maintenance Program provides repairs and preventive maintenance for approximately 24,500 miles of state highway and various signs and structures within the highway right-of-way. Winter plowing, sanding, and year round repair to the state highway system are the responsibility of the staff in the Maintenance Program. The program currently utilizes approximately 760 FTE statewide and operates with an annual budget of nearly \$130 million.

The purpose of this IT project is to replace the current Maintenance Management System (MMS) which was developed in the 1980's. The objective is to provide MDT managers the ability to set goals, develop, implement, and maintain work programs, analyze personnel and equipment, and allow for management of information not currently available in the MMS system.

Business processes have evolved significantly, technology has advanced tremendously, and the expectations of our customers have increased proportionately. Implementing a new MMS is the cornerstone of our business process improvements by increasing maintenance efficiencies, maintaining highway assets at the lowest life-cycle cost, and improving customer service and safety.

The request for a new Maintenance Management System is based on the fundamental concepts of saving time and money by replacing redundant manual operations with automated processes. A new system is expected to be user friendly and provide tools allowing for more effective planning, organizing, resource management, and performance management. It will also analyze and distribute the appropriate data to expedite informed decisions in an efficient and cost effective manner providing statewide continuity, and allowing an improved level of service to the traveling public.

Replacing the current system with a full-featured MMS would improve timeliness, accuracy of data collection and employee efficiency. The system would also support all of the maintenance programs within the Division so it will no longer be a silo application to general maintenance operations only.

EPP - 0302

Initiative 3 Commercial Vehicle Information Systems

Commercial Vehicle Information Exchange Window Enhancement Project (CVIEW)

Project Objectives

1. Implement a web services interface to retrieve Unified Carrier Registration (UCR) data from the federal Safety and Fitness Electronic Records (SAFER) system for storage in the CVIEW data repository.
2. Implement a web services or XML interface between MDOJ's MERLIN system and MDT's CVIEW repository to provide more timely intrastate (county-plated) registration data transfers to CVIEW.
3. Modify existing CVIEW software to provide the ability for CVIEW users to examine more detailed intrastate registration information.
4. Implement a system-to-system process allowing PrePass to verify intrastate vehicle credentials for enrolling and tracking registration compliance.

Commercial Carrier Account Management System (CCAMS)

Project Objectives

1. To provide system users the ability through VISTA CA (Common Account) to maintain accurate customer account information and issue credentials with correct carrier information. In addition, CCAMS will provide the ability to synchronize Motor Carrier accounts assuring compliance with Federal Safety regulations and Montana laws, rules and policies, as well as IRP (International Registration Plan) and IFTA (International Fuel Tax Agreement) requirements.
2. Implement CCAMS to provide the ability to manage accounts across all Xerox VISTA systems. This includes IRP, IFTA, Permitting and Common Account. CCAMS will use validation routines for USDOT (United States Department of Transportation) / TIN (Tax Identification Number) numbers and provide user alerts relative to credentialing and safety rating changes automatically across all systems and allow credentialing managers the ability to maintain accurate customer accounts across all three systems.

EPP - 2203

SECTION 6: ENTERPRISE ALIGNMENT

Communities of Interest Participation

- ☒ Government Services
- ☒ Public Safety
- ☒ Human Resources
- ☒ Environmental
- ☐ Education
- ☒ Economic
- ☐ Cultural Affairs
- ☒ Finance

SECTION 7: PLANNED AGENCY IT EXPENDITURES

<u>Expense Category</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>
Personal Services	9,909,769	9,784,094	9,784,094	9,784,094	9,784,094	9,784,094
Operating Expenses	10,522,199	10,565,397	10,565,397	10,565,397	10,565,397	10,565,397
Initiatives						
Other expenditures	397,519	397,519	397,519	397,519	397,519	397,519
Totals	20,829,487	20,747,010	20,747,010	20,747,010	20,747,010	20,747,010

SECTION 8: ADDITIONAL INFORMATION - OPTIONAL